The Chinese red-headed centipede Scolopendra mutilans (Chilopoda: Scolopendridae) is a predator of the terrestrial macrophagous leech Orobdella whitmani (Hirudinida: Orobdellidae)

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ミミズの手帳

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The Chinese red-headed centipede *Scolopendra mutilans* (Chilopoda: Scolopendridae) is a predator of the terrestrial macrophagous leech *Orobdella whitmani* (Hirudinida: Orobdellidae)

We report herein the depredation of a terrestrial leech by an individual of a centipede species. At 02:07 JST on 24 May 2018, the first author observed a scolopendrid individual preying on a terrestrial leech, in a cemetery adjacent to a laurel forest in Sakyo-ku, Kyoto, Japan (35.0223°N, 135.7975°E; elev. 104 m). Both the centipede and leech were collected and transported to the laboratory. The centipede was directly preserved in absolute ethanol, while the leech was preserved in 70% ethanol, following Nakano (2018). The specimens have been deposited in the Zoological Collection of Kyoto University (KUZ). The centipede (KUZ Z2024; body length, 80.1 mm) was identified as *Scolopendra mutilans* L. Koch, 1878, based on Shinohara *et al.* (2015) and Kang *et al.* (2017). The leech (KUZ Z2023; body length, 86.8 mm) was identified as *Orobdella whitmani* Oka, 1895 by the last author.

During the observation in the field, *S. mutilans* was found biting the posterior area around the caudal sucker of *O. whitmani* (Fig. 1). The leech was struggling against the depredation event. Although the first author closely approached the two individuals and took several photographs, *S. mutilans* continued to feed on the leech for 7 min, at which point the organisms were collected by the first author.

Scolopendra mutilans is an aggressive predator that feeds primarily on arthropods and envenomates its prey (Dugon and

Fig. 1. Depredation of *Orobdella whitmani* by *Scolopendra mutilans*.

Arthur, 2012). Scolopendromorph centipedes can also feed on earthworms and even small vertebrates (Voigtländer, 2011). *Orobdella* leeches, which are indigenous to the Far East, feeds on earthworms (Nakano, 2017). However, our knowledge of the predators of *Orobdella* has been severely limited. Although predation of *Orobdella* leeches by the burrowing snake, *Achalinus spinalis* Peters, 1869, was once mentioned, this predator record was just based on a personal communication (Shibata, 1968). The present discovery elucidates the predator-prey relationship between scolopendrid centipedes and terrestrial *Orobdella* leeches.

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Fig. 1 is shown in color online; printed in black-and-white.